



**Cambridge International Examinations**  
Cambridge International General Certificate of Secondary Education

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**GEOGRAPHY**

**0460/11**

Paper 1

**October/November 2016**

MARK SCHEME

Maximum Mark: 75

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**Published**

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This document consists of **13** printed pages.

Page 2	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0460	11

- 1 (a) (i) South Korea....China....Italy  
Correct order needed [1 mark] [1]
- (ii) Decrease = Japan/Germany/Poland/Russia  
Highest rate of growth = India [2 @ 1 mark] [2]
- (iii) Ideas such as:
- No abortion available;
  - little availability of/people don't use contraception/family planning;
  - not educated re. contraception/impact of population growth/family planning;
  - not likely to be able to afford contraception;
  - want children to work/earn money (or example);
  - want children to look after parents in old age;
  - want children to look after younger siblings/do domestic chores;
  - no government policy to reduce family size;
  - have large families due to tradition/status;
  - have large families due to religious influences;
  - high infant mortality rate/have greater number of children in the
  - hope some will survive;
  - polygamy;
  - women marry at young age;
  - women do not have careers;
  - keep having children until boys is born to carry on family name;
  - desire for girl children to obtain dowry money  
etc. [3 @ 1 mark] [3]
- (iv) Ideas such as:
- people do not have enough resources/raw materials;
  - lack of fuel/power (or example such as electricity);
  - lack of work;
  - poverty/people cannot afford (specified items, e.g. education, houses, etc.);
  - inadequate food supplies/starvation/famine/lack of space for agriculture;
  - poor access to education;
  - poor access to health care/lack of hospitals;
  - high levels of disease/high death rates/low life expectancy/high IMR;
  - lack of/overcrowded housing/not enough space for housing/people live  
in/growth of squatter settlements;
  - atmospheric/water pollution;
  - inadequate water supply;
  - lack of sanitation,
  - overcultivation;
  - overgrazing;
  - disputes over agricultural land/places to live;
  - traffic congestion;  
etc. [4 @ 1 mark] [4]

Page 3	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0460	11

- (b) (i) Increasing proportion of 65+/old dependents/old people/people living longer;  
 Decreasing proportion of 0–19/children/young people/young dependents;  
 Increasing proportion of 20–64/economically active/adults;  
 Supporting statistics, e.g. 5% over 65 in 1950 likely to be 16% in 2050  
 /3X greater percentage, etc.  
 (1 mark MAX – Reserved)  
 (NB 1% tolerance on statistics) [3 @ 1 mark] [3]

(ii) Ideas such as:

- lowering of death rates/increase of life expectancy;
- improvements in health (medical) care/more doctors/more hospitals/better equipment (technology) used in hospitals;
- reduction of diseases/inoculation/medicines/cures for illnesses;
- improved sanitation;
- better water supplies;
- better diet/food supplies;
- healthy lifestyle/exercise;
- education about health/hygiene/diet;
- support for elderly/old people's homes;
- availability of pensions;
- lowering of birth rates/people have less children;

reasons for lower birth rate to MAX 1, etc.

(5 @ 1 mark) or development

[5]

(c) Levels marking

Level 1

Statements including limited detail which evaluate the population policy.

[1–3 marks]

Level 2

Uses named example.

More developed statements which evaluate the population policy.

(NB Max 5 if no named or inappropriate example)

[4–6 marks]

Level 3

Uses named example.

Comprehensive and accurate statements including some place specific reference.

[7 marks]

Content Guide:

Answers are likely to refer to:

- changes in birth rates
- consequences of falling/rising birth rates
- imbalance in proportions of male/female
- migration, etc.

Place specific reference is likely to consist of:

Named parts of the chosen country/location detail,

Specific details of the policy

Population data, etc.

NB The population policy could relate to natural population change or migration.

[7]

**[Total: 25 marks]**

Page 4	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0460	11

- 2 (a) (i) Area close to the CBD/close to the centre of the city [1 mark] [1]
- (ii) long and straight;  
right angles to each other;  
parallel  
grid pattern/rectangular/square, etc. [2 @ 1 mark] [2]
- (iii) Ideas such as:
- to improve living conditions/quality of life/standard of living;
  - areas are old/to modernise housing/build new houses/we need more houses/are derelict;
  - properties lack amenities;
  - factories/industries have closed down/are unoccupied;
  - to attract/develop new business opportunities/industrial estates/retail parks/factories;
  - to create employment (jobs)/people need jobs;
  - new road building/inner ring roads being built/to improve traffic flow /building an urban expressway;
  - some land is currently not being used/wasted, etc. [3 @ 1 mark] [3]
- (b) (i) A = Suburbs  
B = CBD  
C = Inner city [3 @ 1 mark] [3]
- (ii) One mark per appropriate description of **land use** based on photograph selected with credit for development;
- Photograph A:  
housing/apartments;  
High rise buildings;  
Open space/sports field;  
Modern buildings, etc.
- Photograph B:  
High rise buildings;  
High density land use/crowded;  
Offices;  
Especially on upper floors;  
Shops/retail;  
High order services;  
Roads;  
Restaurants;  
Apartments;  
Hotels;  
banks, etc.
- Photograph C:  
High density;  
Old buildings;  
Housing/apartments;  
Offices;  
3 storeys, etc. [4 @ 1 mark] [4]

Page 5	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0460	11

(iii) Ideas such as:

- variation in the cost of land;
- land will be higher cost in CBD;
- variation in accessibility;
- CBD will be most accessible/focus of roads;
- Relief of land;
- Historical development of urban area etc.

(5 @ 1 mark) or development

[5]

(c) Levels marking

Level 1

[1–3 marks]

Statements including limited detail describe the effects of urban sprawl.

Level 2

[4–6 marks]

Uses named example.

More developed statements which describe the effects of urban sprawl.

(NB Max 5 if no named or inappropriate example)

Level 3

[7 marks]

Uses named example.

Comprehensive and accurate statements with some place specific reference.

Content Guide:

Answers are likely to refer to:

Deforestation/loss of vegetation/loss of farmland,

Impacts on ecosystems/food chains,

Traffic congestion,

Atmospheric pollution,

Water pollution.

Noise pollution,

Visual pollution.

House prices/land values increase,

Growth of squatter settlements, etc.

Place specific reference is likely to consist of:

Locational details,

Specific details of transport/communication network,

Named businesses, etc.

[7]

**[Total: 25 marks]**

Page 6	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0460	11

3 (a) (i) A = Strato-volcano B = Shield volcano

NB Both needed for 1 mark

[1 mark] [1]

(ii) Ideas such as:

- B is higher/A is lower (or statistics);
- B is wider/A is narrower (or statistics);
- A has different layers but B does not;
- A has 2 vents B has one;
- B is more gently sloping/A is steeper, etc.

NB Points need to be comparative.

[2 @ 1 mark] [2]

(iii) X = Vent

Y = Magma Chamber

Z = Crater

[3 @ 1 mark] [3]

(iv) Ideas such as:

- scenic beauty/views;
- tourist industry (examples of jobs in tourist industry);
- fertile soils/high yields of crops;
- geothermal power/'free' hot water;
- minerals/mining or example;
- building materials;
- hot springs;
- religious/cultural significance, etc.;

[4 @ 1 mark] [4]

(b) (i) Ideas such as:

- circle/ring;
- around Pacific Ocean;
- linear/in lines;
- along west of Americas;
- east of Asia;
- north of Australasia;
- isolated volcanoes (2 volcanoes) in center of Pacific Ocean, etc.

[3 @ 1 mark] [3]

(ii) Ideas such as:

- along plate boundaries/between plates/edge of plates/where plates meet;
- which are lines of weakness;
- convergence of plates/plates move towards each other;
- subduction/one plate sinks;
- as oceanic crust is more dense (dev);
- destruction of crust/magma created;
- build up of magma;
- creating pressure (dev)
- release of magma;
- through cracks in crust (dev);
- hot spots (accept if related to Hawaii or similar, etc.)

(5 @ 1 mark) or development

[5]

Page 7	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0460	11

## (c) Levels marking

Level 1 [1–3 marks]  
Statements including limited detail which describe the impacts of an earthquake.

Level 2 [4–6 marks]  
Uses named example.  
More developed statements which describe the impacts of an earthquake.

(NB Max 5 if no named or inappropriate example)

Level 3 [7 marks]  
Uses named example.  
Comprehensive and accurate statements including some place specific reference.

Content Guide:

Answers are likely to refer to:

deaths,  
injuries,  
destruction of property,  
fires,  
damage to infrastructure,  
economic impacts, etc.

Place specific reference is likely to consist of:

Locational details,  
Date/Richter scale measurement,  
Details of named parts of the area,  
Statistical information, etc.

[7]

**[Total: 25 marks]**

Page 8	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0460	11

4 (a) (i) Meander [1 mark] [1]

(ii) Ideas such as:

- gentle slope;
- rocks/pebbles/deposits;
- inside bend, etc.

[2 @ 1 mark] [2]

(iii) Ideas such as:

- speed of flow is slow/reduced/less energy;
- deposition of materials
- insufficient energy to move them;
- accumulation over time, etc.

[3 @ 1 mark] [3]

(iv) e.g. **flooding:**

reservoirs/dams upstream;  
 increase height of banks/raise levees/build artificial levees;  
 afforestation/reduce deforestation;  
 overflow channels/spillway;  
 straighten channel;  
 dredging;  
 widening river;  
 warning systems/monitoring;  
 land zoning, etc.

**erosion:**

strengthen banks/add hard rocks to banks/place rock barriers  
 in front of banks;  
 use gabions;  
 concrete river channel, etc.

(4 @ 1 mark) with 1 reserve on each section

[4]

(b) (i) Ideas such as:

- lower course is wider/upper is narrower;
- lower course has gentler slopes/upper steeper slopes;
- upper course is deeper;
- upper course is more V shaped;
- lower course has flood plain but upper does not, etc.

NB Points made need to be comparative

[3 @ 1 mark] [3]



Page 9	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0460	11

- (ii) Explanation of formation of waterfall:  
horizontal hard rock layer/hard rock on top of soft;  
erosion of soft rock;  
named erosional process (MAX 1)  
formation of plunge pool;  
undercutting/hard rock not supported;  
collapse of hard rock;  
retreat of waterfall;  
gorge formation, etc.

NB Credit marks on diagram labels or in written text but no double credit.

(5 @ 1 mark) or development

[5]

(c) Levels marking

Level 1 [1–3 marks]  
Statements including limited detail which describe opportunities provided for people by a river.

Level 2 [4–6 marks]  
Uses named example.  
More developed statements which describe opportunities provided for people by a river.

(NB Max 5 if no named or inappropriate example)

Level 3 [7 marks]  
Uses named example.  
Comprehensive and accurate statements, including some place specific reference.

Content Guide:

Answers are likely to refer to:  
agriculture,  
fishing,  
transportation,  
water supply,  
power supplies,  
tourism, etc.

Place specific reference is likely to consist of:

Locational details;  
Specific locations along the river, etc.

[7]

**[Total: 25 marks]**

<b>Page 10</b>	<b>Mark Scheme</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Cambridge IGCSE – October/November 2016</b>	<b>0460</b>	<b>11</b>

- 5 (a) (i)** Human Development Index [1 mark] [1]
- (ii)** Higher generally in North America/high North America but low/medium in Africa; more varied in Africa [2 @ 1 mark] [2]
- (iii)** Ideas such as:
- It takes into account a variety of factors/it is a composite index/uses more than one indicator/provides a general/overall indication of development/it is better than just using income;
  - Takes into account life expectancy/education/mean years of schooling;
  - Produces an index of 0 to 1/easy to carry out comparisons between countries/change over time
- [3 @ 1 mark] [3]
- (iv)** Ideas such as:
- specific references to variation in climate or example;
  - variations in relief;
  - variations in soil fertility;
  - presence/absence of rivers/water supplies/drought;
  - communications/accessibility/transport links;
  - impacts of historical development/length of time development has been occurring,
  - impacts of colonisation;
  - presence/absence of raw materials/resources (or example);
  - accessibility/presence of ports/landlocked;
  - government policies/political system;
  - corruption;
  - varying levels of education/skills;
  - trading policy/free trade;
  - AIDs;
  - investment/aid from abroad/charities;
  - presence of TNCs;
  - war/unrest;
  - degree of reliance on primary production;
  - development of a specific industry (e.g. tourism, mining, commercial agriculture, etc.)
- [4 @ 1 mark] [4]

Page 11	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0460	11

(b) (i) Ideas such as:

- positive relationship/life expectancy increases with GNP/low/high life expectancy = low/high GNP;
- statistics to illustrate relationship – 2 pairs required;
- relationship is not exact/anomaly;
- e.g. over 10 000 there is little if any relationship, etc.

*NB Reserve 1 marks for statistics*

[3 @ 1 mark] [3]

(ii) Ideas such as:

- high GNP will result in more investment in health care;
- and people will be able to afford medicines (dev);
- in countries with high GNP people will be able to afford enough food/good diet;
- so less likely to suffer malnutrition (dev)
- in low GNP countries many people have poor sanitation;
- in low GNP countries many people have water supply;
- so many die from water borne diseases (dev);
- high GNP countries are able to pay pensions to elderly;
- in high GNP countries education is provided about health care/diet, etc.

(5 @ 1 mark) or development

[5]

(c) Levels marking

Level 1

[1–3 marks]

Statements including limited detail which describe organisation and/or links in a transnational corporation.

Level 2

[4–6 marks]

Uses named example.

More developed statements which describe organisation and/or links in a transnational corporation.

(NB Max 5 if no named or inappropriate example)

Level 3

[7 marks]

Uses named example.

Comprehensive and accurate statements, which describe organisation and links in a transnational corporation, including some place specific reference.

Content Guide:

Answers could refer to:

Inputs,  
Processes,  
Outputs,  
Manufacturing and assembly locations,  
Transport network, etc.

Place specific reference is likely to consist of:

Locational details;  
Specific details of transnational,  
Named settlements, etc.

[7]

[Total: 25 marks]

Page 12	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0460	11

- 6 (a) (i) A condition that results from eating a diet in which nutrients are not enough (or are too much) such that it causes health problems/lack of balanced diet/lack of essential nutrients in the diet, etc. [1 mark] [1]
- (ii) More malnutrition in Niger/Niger has more areas with large numbers of cases [accept comparative statistics if totals worked out – 49 000 – 170 000 (BF) 271 000 – 370 000+ (N)] ;  
in regions of Niger 40 000–60 000/over 60 000 but only up to 20 000 in regions of Burkino Faso;  
every region in both countries has some malnutrition;  
Burkina Faso has a more even spread of malnutrition across the country [2 @ 1 mark] [2]
- (iii) Ideas such as:
- drought/desertification/deserts/no nearby rivers to use;
  - infertile soils;
  - population pressure/growth/large population/overpopulation;
  - crop diseases;
  - pests/locusts;
  - lack of money/poverty/unemployment/can't afford to buy (import) food;
  - war;
  - cannot afford fertilisers/pesticides;
  - lack of cultivable land;
  - flooding/tsunami;
  - volcanic eruption;
  - tropical storms;
  - overdependence on cash crops/export market;
  - trade sanctions;
  - lack of transportation to rural areas, etc. [3 @ 1 mark] [3]
- (iv) Ideas such as:
- death/starvation/low life expectancy/malnutrition/famine;
  - conditions such as marasmus/scurvy/kwashiorkor/rickets, etc.
  - people are too weak/cannot work properly;
  - vicious circle/cannot escape poverty;
  - people cannot resist disease/infection/people easily get disease;
  - requirement of international aid;
  - appropriate specified crime;
  - increased food prices, etc. [4 @ 1 mark] [4]
- (b) (i) Ideas such as:
- produces soy milk;
  - protein rich;
  - products made from left over solids/tofu/yogurt/bread;
  - less students will go hungry/lack protein/have poor nutrition/provides food for children/reduces cases of malnutrition;
  - they will perform/concentrate better in school, etc. [3 @ 1 mark] [3]

Page 13	Mark Scheme	Syllabus	Paper
	Cambridge IGCSE – October/November 2016	0460	11

(ii) Ideas such factors such as:

- irrigation;
- use of fertilisers/manure;
- pesticides;
- herbicides/weedkillers;
- land reform;
- use of high quality seeds or example, e.g. IR8 rice/GM crops/HYV seeds;
- improve food distribution network;
- improve food storage/refrigeration/grain silos;
- greenhouses/glasshouses;
- aeroponics;
- hydroponics;
- terracing;
- selective breeding;
- international aid;
- trading of goods (or example) in exchange for food;
- mechanisation, etc.

(5 @ 1 mark) or development

[5]

(c) Levels marking

Level 1

[1–3 marks]

Statements including limited detail which describe the farming system.

Level 2

[4–6 marks]

Uses named example.

More developed statements which describe the farming system.

(NB Max 5 if no named or inappropriate example)

Level 3

[7 marks]

Uses named example.

Comprehensive and accurate statements, referring to inputs, processes and outputs, including some place specific reference.

Content Guide:

Answers are likely to refer to:

Natural inputs,  
Human inputs,  
Economic inputs,  
Processes,  
Outputs,  
By-products, etc.

Place specific reference is likely to consist of:

Locational details;  
Named settlements, e.g. markets  
Specific details about the farm/area,  
Statistical information, etc.